Encouraging Re-Employability and Discouraging Bias

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Abstract

The paper discusses the need for more IT professionals and the need to retain those taking career breaks. The paper discusses the current situation in the UK for unemployed and under-employed computing professionals; and the view of professionals about the need for regular updating of their skills, particularly if they are currently unemployed. The needs of those taking an extended career break, of say five years are also discussed, together with help to encourage and assist those returning to the computing industry.

The paper discusses the actions that have been undertaken by the BCS Quality Specialist Group, BCS Women and Hampshire Branch to provide free training courses, together with the BCS Unconscious Bias Training for all BCS committee members. The comments of those attending these various BCS training courses are discussed.

Keywords: Under-employed, re-employability, extended career breaks, BCS, Unconscious Bias

1.0 Introduction

Computer professionals have by choice or otherwise sometimes taken a career break of possibly five years or more, in some cases to care for very young children. In recent years, due to a number of reasons including the financial crisis and instability, projects have been cancelled or postponed. As a result many experienced IT professionals have become either unemployed or under-employed, as consultants, contractors or those previously in full-time employment. It takes time to obtain a suitable position. This can result in both financial and emotional strain. Also in the fast-changing IT profession their skills can become less current.

In addition, these professionals were probably used to working with other professionals, so might be missing the technical networking aspect of their previous roles [1, 2], as well as the social contact with long term colleagues.

The predicted increase in the need for IT professionals, particularly in Western countries is widely recognised [3]. It was reported that "the UK will need 745,000 additional workers with digital skills to meet rising demand from employers between 2013 and 2017" [4, 5]. There is a need to encourage "returners", both male and female, to the IT profession. It was reported that those shortages in the computing industry also apply to other science, engineering and technology fields [6].

2.0 Actions to Address Extended Career Breaks

Various large organisations have realised the advantages, including financial, of maintaining contacts with experienced IT professionals on extended career breaks of say five years or more, with the aim to re-employ them later. The advantages of those with prior experience and loyalty to the organisation, cannot be underestimated. Companies, such as IBM, introduced a "buddy system". An example of this could be if a woman or man, plans to take an extended "parental leave" until the child starts school, the employee could be paired with another as a "buddy/mentor" who had undertaken earlier a similar extended career break then returned to the organisation. By encouraging regular contact with their "buddy/mentor", the one on extended parental leave could be included in social events to maintain the internal networking and also at very low-cost, training courses, so maintaining their technical skills up-to-date.

There is always the risk that the person will either decide not to return to the computing industry or to join another organisation. The advantage of persuading at least some of the potential returners to re-join the organisation could outweigh the low cost and risks, especially as the "re-joiner" could be very quickly assimilated into the organisation with current relevant skills and with an enhanced loyalty to the organisation.

2.1 Actions by the BCS, The Chartered Institute of IT

Various BCS Branches, Specialist Groups and International Section events have been organised to enhance and maintain the skills of employed and those currently not working in the IT industry. These events include webinars, visits to companies, workshops, presentations and courses, as well international conferences. Additionally, online discussion groups provide useful networking opportunities.

2.2 BCSWomen Specialist Group

The BCSWomen Specialist Group [7] has, for many years, been providing support with CVs, mentoring and networking opportunities. Examples of these are speed networking sessions, and the training in the use of Android devices, use of Open Source software and introduction to Artificial Intelligence. These are either free or are offered at a very low cost. These courses are particularly useful for those on extended career breaks. Many of the participants feel that their skills might require updating before they re-enter the computing industry.

There is a need to encourage returners to the industry, as well as potential computer professionals of the future. The percentage of women in the UK computing industry is 17% which is the same as the average of the other EU countries, which range from 11% in Luxemburg, to the 32% in Bulgaria [3, 8]. This indicates there is an opportunity to increase the number working in IT by encouraging girls to consider IT as a career. The BCSWomen Specialist Group organise events to encourage women and girls into computing. The members also produced posters, showing the roles of actual women in computing. In addition the BCS produced a free e-book, Women in IT, Inspiring the Next Generations, [9] with the backgrounds and career progression of thirty women, mainly in industry, as potential role models.

2.3 BCS Quality Specialist Group

A series of one, two and three full day courses run by Tom Gilb Hon FBCS have been organised by the BCS Quality Specialist Group [10]. The above courses were free for BCS members and either free or under £50 for non-members.

Initially these had been aimed mainly at the "under-employed" IT professionals. The attendees had been a mixture of unemployed and those consultants and contractors that were unable to obtain their normal quantity of employment. Some attendees were in employment, particularly from smaller organisations, which were unable to offer training opportunities due mainly to the cost. The courses held included:

- Advanced Project Management : for Quality and Rapid Value Delivery (2 day courses)
- Project and System Level Requirements Specification (2 day courses)
- Lean Quality Assurance (2 day and 3 day courses)
- Real Architect Course (1 day course)
- Requirements Engineering (2 day course)
- Architecture Engineering Tools, a quantified multidimensional approach to IT architecture and design (2 day course)
- Specification on Quality Control Engineering (1 day course)
- Value Delivery Management Tools (1 day course)

These courses have been mainly held in London, but also in the Midlands and in Scotland. They have been open to both BCS members as well as non-BCS

members. The feedback from these courses has been amazing, with quotes from attendees such as:

- "Thank you for making this a free course, as a job seeker, it is extremely difficult to near not possible to fund myself on formal training courses".
- "I was able to use these considerations at a recent interview & of course will be using the techniques on my next project."
- "May I just say that I found the two days very worthwhile and appreciated the time and effort that Tom has clearly put in to prepare to cover these important topics. Tying projects and their value back to the business, business priorities and financial benefits would appear to be fundamental … and yes it is often overlooked by the lack of breadth of many project managers and their project sponsors".
- "You have allowed me to see I DO know how to do my job; I have been able to restore my confidence in myself"

2.4 Branch Activities

A number of free one day courses have been held by BCS Hampshire Branch [11] which were available to both the BCS and non--BCS Members. Again the preference was given to the "under employed". These have been laboratory based, where up to twenty attendees have been able to increase their skills on courses such as Web Development (1-day course), or on the soft skills which have been run in a classroom environment. The Soft Skills course was aimed in addition at the recent IT graduates as well as the under-employed experienced professionals. Although many of the latter group had been able to obtain Government backed assistance with CVs, and interview skills, these are not necessarily related to current IT practices. In many cases it has been a considerable number of years since those professionals had applied for a job. The new graduates are in a different position, having, through their courses, currency in technical ideas but often they have had little or no experience of genuine job interviews in the computer industry.

It has been reported by those attending that both these technical and non-technical courses have been of considerable interest and benefit to the attendees. The positive views from the attendees of these Hampshire Branch courses, as with those that attended the Quality Specialist Group courses, reflect the benefits experienced, both from the technical knowledge but also from addressing the issues of isolation felt by those professionals after being under-employed for several months or several years. The advantages of being able to network with other computer professionals in similar situations have been reported to be of direct benefit. In a few cases, new start-up companies have been formed between professionals with similar or complementary skills, having met on these courses.
Evening sessions also have been held by the Hampshire Branch at Southampton Solent University, with specialists about the assistance available for micro SMEs, with fewer than ten employees, information on forming a company, the legal and financial actions required, advice on low-cost internet marketing, including the benefits of Search Engine Optimisation to raise the profile of their websites.

A series of presentations was also arranged to assist in coping with redundancy, considering both the legal issues and the emotional ones. An attendee of one of these sessions e-mailed to say that "it was unfortunately so relevant, as I was made redundant unexpectedly the following day".

3. Results of Survey of Course Attendees

The survey was undertaken of a sample of 176 attendees of the full-day courses by Tom Gilb Hon FBCS, to identify their background, needs and views. Of the course attendees, 54% were already BCS members, while 24% said that they were now thinking of joining. Eighty eight per cent were thirty years of age or older and 79% had worked in the computing industry for more than five years. Also 38% of the attendees were currently unemployed.

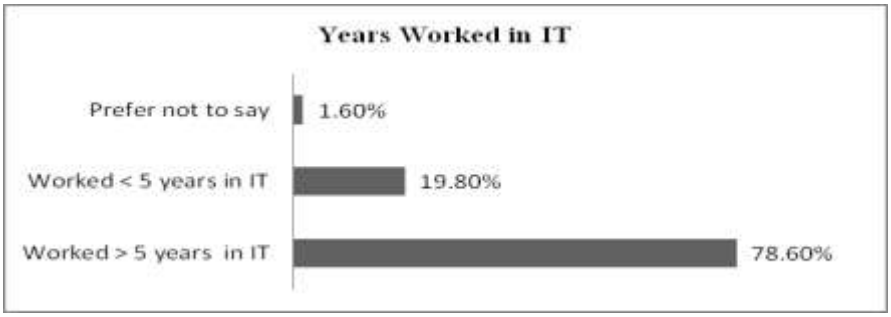

Figure 1: Length of Time Working in the Computing Industry

When considering the last year of their employment, whether currently employed or otherwise, 46% said they were able to attend at least one day's technical course in that last year and 47% said they were able to attend at least one day of non-technical courses during that final year of employment.

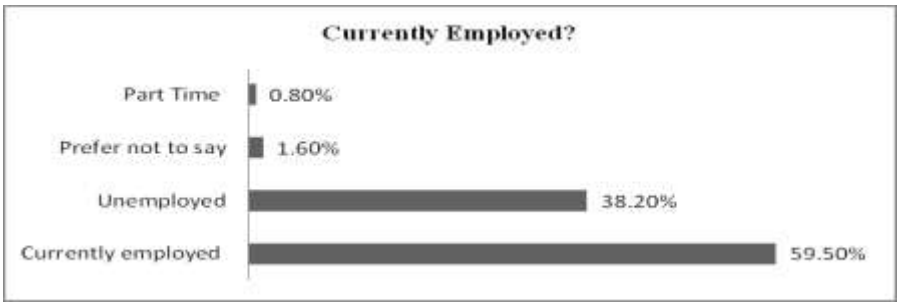

Figure 2: Current Employment Status

Regarding the attendance at a BCS events, 40% had previously attended a free BCS Quality SG full-day course, whereas 60% in the last year, regardless of employment, had attended a BCS evening event and 37% indicated they had

attended up to five evening events. Further Continuous Professional Development (CPD) activity was also undertaken by 55% of the attendees, these ranged from reading articles, attending conferences, attending trade shows and participating in webinars.

The respondents of the survey were asked to identify the major advantages and disadvantages of regular courses or CPD activities.
The advantages of undertaking CDP were stated as follows:

- Improvement of Knowledge and Skills
- Keeping Up-to-date
- Networking
- Being Professional
- Improvement of Job Opportunities

These were similar to the results of the advantages of undertaking these courses, as shown in Figure 3.

Figure 3: Adavantages of these Courses

On comparing the views of those in employment and currently not in employment with the disadvantages of attending courses and undertaking other CPD activities, the majority of those in employment identified disadvantages of "Time" as a major issue, whereas "Cost" such as of travel, was the major disadvantage for those currently not in employment. The combined results of the disadvantages of undertaking these courses are shown in Figure 4.

Figure 4: Disadvantages of Attending Courses

The respondents were also asked to indicate topics on which they would like to attend courses. In general, the topics suggested by thirty of those in work were mainly on specific technical topics, such as Agile, mobile computing, Six Sigma, Big Data, Project Management, Testing, more from Tom Gilb Courses and popular programming languages. However one liked "starting a business" and "practical

tips for finding employment", and another listed "job-seeking for women with scattered CVs".

The respondents that were currently not working who answered this question, were again suggesting mainly technical topics, with two suggesting a course on "how to be self-employed". Other suggestions tended to be less specific such as "courses in the new technology". These are shown in Figure 5.

Figure 5: Courses Requested

4.0 Organising these Full-day Courses

From the authors' experiences in organising these courses, the venue and its convenient distance to suitable public transport seems to be a major factor. If technology, especially laboratories are used, it is felt to be essential that the presenter or at least an attendee is very familiar with the equipment and also the building. Unforeseen situations can occur, requiring immediate change to different rooms, such as equipment malfunction or very unexpected noisy road works outside the windows, which had been experienced.

It is useful to organise either, tea and/or soft-drinks or to warn the attendees to bring their own refreshments. Short breaks at regular intervals such as five or ten minutes every hour is advisable. It is not necessary to provide lunch, as long as it is made clear in advance that it is not provided. It is an advantage if the start time would allow the attendees to use reduced rail fares, but this is not always possible depending on the amount of material to be covered.

The marketing of these sessions has been via e-mail circulars to the various Specialist Groups and Branches, and asking the relevant Chairs to circulate it to their members. The activities were also always placed on the appropriate BCS websites and on appropriate LinkedIn groups, many of which are open to non-BCS members.

The willingness of experienced professionals, such as Tom Gilb Hon FBCS, Dr Michael Elliott and Dr Nick Whitelegg, to freely give their time for these activities is amazing, and offers of running new topics by BCS members are always gratefully received.

5.0 Discouraging Un-Conscious Bias

Surveys [6, 12, 13] were undertaken, including by the Royal Academy of Engineering, on different aspects of diversity. It was found that between 12% and 15% of engineering students were female, but only a slight difference existed in the ability of the proportion of the students to gain employment in the engineering and technology sector, flavouring male students (56%), whereas slightly a higher proportion (51%) of the female students undertook further study. The variation regardless of gender, indicated a larger difference between ethnic backgrounds. It was found that 71% of the "white engineering graduates" compared with 51% of the BME (Black and Minority Ethnic) graduates were in full-time employment within six months of graduation. After six months, 60% of the white students whereas only 40% of the BME engineering students had employment in "Engineering occupations, with 14% of the black engineering graduates unemployed compared with only 7% of the white engineering graduates".

Action should be undertaken by BCS Branches, Specialist Groups and International Sections to avoid Unconscious Bias. The survey was undertaken by the Employers' Network for Equality and Inclusion [13], showed that of those surveyed:

- 34.1% had a bias in favour of non-disabled people over disabled people
- 16% had a bias in favour of white people over black people
- 2.6% had a bias in favour of men over women
- 67% of the British public feel uncomfortable talking to people with disability
- 36% believe disabled people are not as productive as everybody else.

The unconscious bias could relate to any form of bias, from disability, ethnical, religion, sexual, gender, being too old or too young. Equality and diversity is viewed as of utmost importance for many years to the BCS. Although to date only one metric has been set by the BCS Trustee Board. This is that all BCS Boards, Committees etc should aim for 20% of women which should eventually progress to 40%. Other metrics relating to different aspects of inclusion were considered, but these would be more sensitive to collect. The BCS specified that all BCS volunteers who serve on Committees, Boards, Council and the Trustee Board, should undertake the BCS Unconscious Bias training session, lasting about one hour.

There is normally very positive response to those that have attended these Un-Conscious Bias sessions. A few of the views include:

- “Engaging. Will have things to take back to the branch to consider on future undertakings"

- “Recommend a wider range of members being trained on this topic - for example, software programmers would benefit from considering these issues in product creation"

- "Very useful. Has given me a lot to think about regarding developments that my Branch, decisions that my Branch has made in the past and better insight into what we could introduce going forward"
- "Glad to have done it. I liked the open discussion format"
- "Highly beneficial and very useful. Exercises were very good, diversity across the group was very beneficial"
- "Thought provoking scenarios, useful discussions".

These sessions should raise awareness of issues such as trying to ensure that any disabled attendees can have suitable access to the locations and facilities, although this is not always possible, such as in the case of visits; requesting a speaker to face an attendee who is known to have to lip-read. Other issues if known about in advance, should be considered and if possible solutions or ways to minimise the various problems, associated with sight, such as requesting speakers to use suitably larger font for power point slides, or not using colours such as red against a green background. Issues relating to arranging for special diets and separation, or labelling of refreshments should be addressed whenever possible.

As part of the planning of the BCS programme, attempts could be made to include a variety of speakers such as from different ethnic backgrounds and gender. To try to help to address the problem experienced by many disabled new computing graduates, in obtaining their first employment in the IT industry, events could be organised, such as those held by the Hampshire Branch. These were aimed at encouraging organisations to consider employing IT professionals with disabilities. A panel was formed to include a wheelchair user, a blind and a partially sighted IT professional, together with their direct managers, to discuss any issues and how these were overcome.

6.0 Conclusion

It is hoped that by these various initiatives taken by the BCS, or by other organisations will encourage more people to enter or re-enter the computing industry. The BCS Taking a Break, A Career Break Planning Guide for People in the IT Industry [14] gives detailed check lists and advice before and after taking a career break, including the warning that it is more difficult to return to work if the career break last over two years. It also gives practical advice on maintaining an active CV during a career break, including undertaking related and non-related voluntary work, attending free or distance learning computing training courses and writing article. Suitable role models, such as those shown in the free e-Book, "Women in IT" [9] produced by the BCS, and activities to encourage self-confidence and to up-skill professionals might hopefully help to address these issues, and overcome problems of unconscious bias.

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